

**What is claimed is:**

1. A method of plating a non-conductive substrate comprising the steps of:
  - 5 a) etching a surface of the non-conductive substrate with an etching solution, said etching solution comprising permanganate salt and a mineral acid;
  - b) activating the etched surface of the non-conductive substrate with an activating solution comprising a palladium salt and an amine complexor;
  - 10 c) contacting the etched and activated surface of the non-conductive substrate with a reducing agent for the palladium; and
  - d) electrolessly plating the etched and activated surface.
- 15 2. The method according to claim 1, wherein the etching solution consists essentially of a permanganate salt and a mineral acid.
3. The method according to claim 1, wherein the etching solution is maintained at a pH of less than about 9.
- 20 4. The method according to claim 1, wherein the permanganate is selected from the group consisting of potassium permanganate and sodium permanganate.
5. The method according to claim 1, wherein the permanganate is potassium permanganate.
- 25 6. The method according to claim 1, wherein the mineral acid is phosphoric acid.
7. The method according to claim 1, wherein the palladium salt is palladium sulfate.
- 30 8. The method according to claim 1, wherein the amine complexor is 2-amino pyridine.

9. The method according to claim 1, wherein manganese oxide formed on the surface of the non-conductive substrate during the etching step is not completely stripped from or reduced on the non-conductive substrate prior to the activating step.
- 5 10. The method according to claim 1, wherein the reducing agent comprises sodium borohydride in a caustic solution.
11. The method according to claim 1, wherein the electroless plating solution is selected from the group consisting of electroless nickel and electroless copper solutions.
- 10 12. The method according to claim 11, wherein the electroless plating solution is an electroless nickel plating solution that does not contain ammonia.
13. An etching solution for preparing a non-conductive substrate for subsequent metal plating, said etching solution comprising a permanganate and a mineral acid.
- 15 14. The etching solution according to claim 13, wherein the permanganate is selected from the group consisting of potassium permanganate and sodium permanganate.
- 20 15. The etching solution according to claim 13, wherein the alkali permanganate is potassium permanganate.
16. The etching solution according to claim 13, wherein the mineral acid is phosphoric acid.
- 25 17. An activator solution for activating a non-conductive substrate for subsequent metal plating, said activator solution comprising a palladium salt and an amine complexor.
18. An activator solution according to claim 17, wherein the palladium salt is selected from the group consisting of a water soluble palladium compound.
- 30 19. An activator solution according to claim 17, wherein the palladium salt is palladium sulfate.

20. An activator solution according to claim 17, wherein the amine complexor is 2-amino pyridine.
21. A composition for etching plastics, said composition comprising a permanganate salt and a mineral acid.
22. A composition according to claim 21 wherein the mineral acid is phosphoric acid.
23. A composition according to claim 21 wherein the pH of the composition is from about 1 to 3.
24. A composition according to claim 22 wherein the pH of the composition is from about 1 to 3.
25. An activator composition comprising a dry mixture of a palladium salt, an amine complexor and a dry acid powder.
26. A composition according to claim 25 wherein the dry acid powder is boric acid.
27. A composition according to claim 25 wherein the amine complexor is 2-amino pyridine.